RPB-99-111

Paper No. 12

#14

UNITED STATES PATENT AND TRADEMARK OFFICE

BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES

Ex parte RAVI S. ADAPATHYA and BRIAN H. LEONARD

Appeal No. 2002-1967
Application No. 09/404,182

ON BRIEF

Before STAAB, McQUADE, and BAHR, *Administrative Patent Judges*.

STAAB, *Administrative Patent Judge*.

DECISION ON APPEAL

This is a decision on an appeal from the examiner's final rejection of claims 1-51, all the claims currently pending in the application.

Appellants' invention pertains to an asymmetrical, ergonomically designed computer mouse. A further understanding of the invention can be derived from a reading of exemplary claims 1, 17 and 38, which appear in the appendix to appellants' brief.

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The references relied upon by the examiner as evidence of obviousness are:

Gillick et al. (Gillick)	5,530,455	Jun. 25, 1996
Adams et al. (Adams)	6,031,518	Feb. 29, 2000

Claims 1-51 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Gillick in view of Adams.

Reference is made to appellants' brief (Paper No. 9) and to the examiner's answer (Paper No. 10) for the respective positions of appellants and the examiner regarding the merits of this rejection.

DISCUSSION

Gillick, the examiner's primary reference, discloses in Figure 1 a computer mouse 10 having three finger buttons 18, 20 and 22, a scrolling wheel 24, a side button 25 intended for use by the thumb, and a rear portion 26. Aside from the side button 25, the mouse appears to be symmetrical with respect to a longitudinal plane dividing the mouse into left and right hand sides. Gillick's computer mouse appears to correspond to the Prior Art computer mouse illustrated in appellants' Figure 1.[1]

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[1]On page 7 of the specification, appellants describe the Prior Art Figure 1 mouse as being "generally rectangular in shape, but [having] some rounded features like rear end 15." In addition, the location of the thumb button 31 is said to be "at or near the natural position that a user with an average sized

In rejecting the appealed claims as being unpatentable, the examiner implicitly concedes that Gillick's computer mouse does not incorporate many of the various ergonomic design features set forth in the appealed claims. The examiner turns to Adams for a teaching of these features.

Adams is directed to an ergonomic input device for a computer. The illustrated embodiment comprises a trackball-type device having a trackball 32, a scrolling wheel 34, and primary key and secondary keys 28 and 30 located on the sidewall of the device intended for use by the thumb. Adams states (column 1, lines 48-58) that the ergonomic design features of the invention apply equally to a mouse-type input device. According to the examiner, it would have been obvious to one of ordinary skill in the art at the time of appellants' invention to apply the ergonomic design concepts of Adams to the computer mouse of Gillick in order to modify the Gillick mouse and thereby arrive at an ergonomically designed computer mouse that corresponds to the subject matter of the appealed claims. We do not agree.

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hand would place their thumb during use" such that "an average user's thumb would always be in contact with thumb button 31 when the user's hand is on mouse 11."

Among the many limitations found in the appealed claims directed to the ergonomic features of appellants' computer mouse are the following:

> (1) the limitation calling for a concave thumb channel in the thumb sidewall for receiving the thumb of the user, and a thumb button extending from the thumb sidewall and located above the thumb channel so that the thumb of the user will be free of contact with the thumb button when the thumb of the user is in the thumb channel;[2]
>
> (2) the limitation calling for the top surface of the mouse body to have an arcuate side view profile that is substantially defined by a single radius, wherein the profile extends from the front end of the mouse body to the rear end of the mouse body;[3] and
>
> (3) the limitation calling for the thumb sidewall to be inclined outwardly at the front end of the mouse body, and the thumb sidewall to be inclined inwardly at the rear end of the mouse body.[4]

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[2]This limitation is described in appellants' specification at page 11, lines 12-17, and page 12, lines 5-10, and is arguably shown in Figures 2, 4 and 9, where the thumb button 83 is located above the area 81 designated in appellants' specification as being the thumb channel.

[3]This limitation is described in appellants' specification at page 9, lines 5-13, and is shown in Figures 4 and 7.

[4]This limitation is described in appellants' specification at page 10, lines 1-14, and is shown in Figures 8 and 9, where the thumb sidewall 51 is inclined "outwardly" in a first direction at an angle 61 (see Figure 8) at the front end of the mouse body and inclined "inwardly" in a second opposite direction at an angle 78 (see Figure 9) at the rear end of the mouse body.

Each of the independent claims on appeal includes at least one of the above limitations. More specifically, independent claim 1 includes limitation (1), independent claim 17 includes limitations (1) and (2), independent claim 29 includes limitations (2) and (3), independent claim 38 includes limitation (3), and independent claim 47 includes limitations (2) and (3).

We appreciate that Adams is directed to an ergonomically designed computer input device, such as a mouse or trackball, that comfortably supports the user's hand so that the thumb, fingers, and forearm are oriented in neutral postures to minimize stress (column 1, lines 48-67). We also appreciate that most of the edges and surfaces of the Adams input device are curved (column 4, lines 13-23). Be that as it may, it is our opinion that the combined teachings of the applied prior art do not disclose, teach or suggest any of the above noted limitations.

More specifically, limitation (1) is not disclosed, taught or suggested by the combined teachings of the applied prior art because the thumb sidewall of Gillick's mouse is flat and because the position of Gillick's thumb button 25 relative to the height of the thumb sidewall would appear to result in the thumb contacting the thumb button during normal usage. As to Adams, the primary and secondary keys 28 and 30 located on the thumb

sidewall themselves form a depression for receipt of the user's thumb such that both the primary key 28 and the secondary key 30 are located within, rather than above, what may arguably be called the thumb channel of the Adams input device. In our opinion, Adams would have, at best, suggested locating the thumb button 25 of Gillick within a thumb channel.

Limitation (2) is not disclosed, taught or suggested by the combined teachings of the applied prior art because in Adams, the side view profile (see Figures 5 and 8) of the input device, while arguably being continuously curved or arcuate from front to back, does not reasonably teach or suggest a side view profile that is substantially defined by a single radius. Moreover, Gillick is clearly lacking in this regard.

Limitation (3) is not disclosed, taught or suggested by the combined teachings of the applied prior art because in Adams, the front and rear view profiles (see Figures 10 and 9, respectively) of the input device do not reasonably teach or suggest a front end of the thumb sidewall that is inclined outwardly in an opposite direction relative to the inclination of the rear end of the thumb sidewall. In addition, Gillick is clearly lacking in this regard.

Rejections based on 35 U.S.C. § 103(a) must rest on a factual basis. *In re Warner*, 379 F.2d 1011, 1017, 154 USPQ 173, 178 (CCPA 1967), *cert. denied*, 389 U.S. 1057 (1968), *reh'g denied*, 390 U.S. 1000 (1968). In making such a rejection, the examiner has the initial duty of supplying the requisite factual basis and may not, because of doubts that the invention is patentable, resort to speculation, unfounded assumptions or hindsight reconstruction to supply deficiencies in the factual basis. *Id.* In the present case, it is our firm belief that the examiner has failed to advance any factual basis to support the conclusion that it would have been obvious to one of ordinary skill in the art to modify Gillick in view of the teachings of Adams in a manner that would have resulted in any of the limitations (1)-(3) noted above. In this regard, the mere fact that the prior art could be so modified does not suffice. *See In re Gordon*, 733 F.2d 900, 902, 221 USPQ 1125, 1127 (Fed. Cir. 1984).

Accordingly, we shall not sustain the standing 35 U.S.C. § 103(a) rejection of claims 1-51 as being unpatentable over the teachings of Gillick and Adams.

The decision of the examiner is reversed.

REVERSED

LAWRENCE J. STAAB)
Administrative Patent Judge)
)
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JOHN P. McQUADE) BOARD OF PATENT
Administrative Patent Judge) APPEALS AND
) INTERFERENCES
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